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11

12   UNITED STATES DISTRICT COURT

13   NORTHERN DISTRICT OF CALIFORNIA

14   SAN JOSE DIVISION

15

16 IN RE RICOH COMPANY LTD. PATENT) CASE NO.: C 03-02289 JW
   LITIGATION   )
17   ) **SYNOPSYS'S AND CUSTOMER**
) **DEFENDANTS' RENEWED MOTION**
18   ) **FOR SUMMARY JUDGMENT OF**
) **NONINFRINGEMENT**
19   )
) Date: March 8, 2010
20   ) Time: 9:00 a.m.
) Courtroom 8, 4th Floor
21 _____) Honorable James Ware

22   **PUBLIC VERSION**

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SYNOPSYS'S RENEWED MOTION FOR SUMMARY
JUDGMENT OF NONINFRINGEMENT
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Frenkel Decl.
The Declaration of Richard G. Frenkel, submitted in support of Synopsys's and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed January 8, 2010

Ex. __
The corresponding exhibit attached to the Declaration of Richard G. Frenkel, submitted in support of Synopsys's and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed January 8, 2010

Adams Decl.
The Declaration of Jay Adams, submitted in support of Synopsys's and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed January 8, 2010

Adams Ex. __
The corresponding exhibit attached to the Declaration of Jay Adams, submitted in support of Synopsys's and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed January 8, 2010

Note: All emphasis throughout the brief is added, unless otherwise indicated.

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NOTICE OF MOTION AND MOTION

PLEASE TAKE NOTICE THAT on Monday, March 8, 2010, at 9:00 a.m., before the Honorable James Ware, United States District Judge, in Courtroom 8 of the United States District Court for the Northern District of California, 280 South First Street, San Jose, California 95113, declaratory judgment plaintiff Synopsys, Inc. and its customers, Aeroflex, AMI and Matrox ("Customer Defendants"), will and hereby do move for summary judgment that Synopsys and the Customer Defendants do not infringe Ricoh's U.S. patent 4,922,432.

This motion is based on two independent reasons why neither Synopsys nor the Customer Defendants infringe the only asserted independent claim (claim 13) of Ricoh's patent. First, claim 13 requires that the input descriptions to the claimed computer-aided design process be "architecture independent." However, there can be no legitimate dispute that the accused input descriptions created by the Customer Defendants and input by them into software products made and sold by Synopsys are not "architecture independent" input descriptions, and thus do not infringe. Second, in order for there to be infringement of the claimed process, Ricoh must show either that a single entity performs all of the steps of that process, or "directs or controls" the performance of all steps. Ricoh cannot prove either. For either or both of these reasons, the Court should enter summary judgment of noninfringement.

This motion is based on this notice of motion and motion, the supporting memorandum of points and authorities, the accompanying declarations of Jay Adams and Richard G. Frenkel, including any exhibits, and such additional evidence and arguments as may hereinafter be presented. A proposed order is included with this motion.

1   **MEMORANDUM OF POINTS AND AUTHORITIES**

2 **I.   INTRODUCTION**

3   Synopsys and its customers, Aeroflex, AMI and Matrix ("Customer Defendants"), do not

4 infringe the asserted claims of Ricoh's U.S. patent 4,922,432 for two independent reasons.

5   First, claim 13[1] requires the user to provide an "architecture independent" description of a

6 proposed application specific integrated circuit (ASIC). However, it is undisputed that the

7 design input files required by the accused Synopsys product describe particular arrangements of

8 registers and "the flow of data through registers" which, as this Court has observed, "*a fortiori*

9 would not be 'architecture independent.'" D.I. 644 at 8:6-9.

10   Second, it is black letter law that a process claim can only be infringed if a single entity

11 performs all steps of the process or "directs or controls" the performance of the steps by others.

12 Here, Ricoh accuses the Customer Defendants of performing all the steps of claim 13 (including

13 step 4, namely providing "architecture independent" descriptions of proposed ASICs). However,

14 there is no genuine dispute that if anyone performs step 3 of claim 13 which requires "storing" a

15 set of rules in "an expert system knowledge base," Synopsys does so alone, without any direction

16 from, or control by, the Customer Defendants.[2]

17   For both of those reasons, summary judgment of noninfringement should be entered.

18 **II.   TECHNICAL BACKGROUND**

19   **A.   The Claimed Process**

20   The alleged invention of claim 13 of the '432 patent is a "computer-aided design process"

21 that purports to assist in designing ASICs. The fourth step in the claimed six-step process is

22 "***describing*** for a proposed [ASIC] a series of architecture independent actions and conditions."

23 _____

24   [1] Although this motion only addresses independent claim 13, the other asserted claims
depend from claim 13. Thus if claim 13 is not infringed, neither are the dependent claims.

25 Further, this motion only addresses literal noninfringement because Ricoh has not asserted
infringement under the doctrine of equivalents.

26   [2] Neither Synopsys nor the Customer Defendants admit to practicing either of these steps.

27 However, for purposes of this motion, Synopsys and the Customer Defendants submit that there
can be no genuine dispute that, if anyone practices the "describing" step, it is the Customer

28 Defendants, alone, and if anyone practices the "storing" step, it is Synopsys, alone.

1   Ex. 1 at 16:45-47. The third step is "***storing*** in an expert system knowledge base a set of rules

2   for selecting hardware cells to perform the actions and conditions." *Id.* at 16:42-44. Using the

3   description of the proposed ASIC and the stored set of rules, the claimed process is said to

4   generate a "netlist" that specifies all of the lowest-level hardware cells needed to perform the

5   desired function of the ASIC. *See id.* at 16:52-65.

6   The "describing" step is the focus of the first basis for this noninfringement motion. The

7   difference between the entities that allegedly perform the "describing" and "storing" steps is the

8   focus of the second basis for this motion.

9   There are different levels at which the functions to be performed by the ASIC can be

10   described as an input to the design process. The "highest" (or most abstract) level is the above-

11   mentioned "series of architecture independent actions and conditions," which the Court has

12   defined as "a set of instructions … that are not dependent on any particular arrangement of

13   hardware cells." D.I. 644 at 7:1-4. At this abstract level, the user describes the functional

14   requirements for a desired ASIC "independent of the 'logic,' *i.e.*, hardware structure, that could

15   'carry out those specific functions.'" *Id.* at 4:17-21.

16   The "lowest" (or least abstract) level is the above-mentioned "netlist," which the Court

17   has defined as "a description of the hardware components (and their interconnections) needed to

18   manufacture the ASIC as used by subsequent processes, *e.g.*, mask development, foundry, etc."

19   Ex. 5 (D.I. 229) at 24:21-25.

20   Between the "netlist" level and the "architecture independent" level is the "register-

21   transfer level" ("RTL"). RTL is a "higher" level than the "netlist," but "lower" than the

22   "architecture independent" level. RTL is lower than the "architecture independent" level

23   because it still specifies arrangements of hardware (*i.e.*, registers) and the flow (*i.e.*, transfer) of

24   information between those registers. As the Court has found, both the netlist and RTL

25   descriptions require the user to input information "based on the user having an understanding of

26   the flow of data though registers, logic gates or any other hardware." D.I. 644 at 8:6-9. In fact,

27   in construing the term "architecture independent actions and conditions," the Court held that it

28   was unnecessary to include a negative limitation disclaiming RTL and other hardware

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1   description languages (HDL) because such descriptions "*a fortiori* would not be 'architecture

2   independent'" *Id.*[3]

3   After the user has provided an "architecture independent" description for a proposed

4   ASIC (step four of claim 13), the sixth step of the claimed process requires that a "set of cell

5   selection rules" must be applied to the "action or condition to be performed" in order to select

6   the appropriate hardware cells from which to build the ASIC. Ex. 1 at 16:56-62. According to

7   this sixth step, the "set of cell selection rules" is located in an "expert system knowledge base."

8   *Id.* at 16:60. This, of course, requires the existence of such a knowledge base.

9   The formation of the knowledge base is the subject of the third step of claim 13: "storing

10 in an expert system knowledge base a set of rules for selecting hardware cells to perform the

11 actions and conditions." *Id.* at 16:42-44. According to Ricoh's patent, the knowledge base is

12 formed when rules are "extracted from expert ASIC designers." *Id.* at 5:25-29. A "Rule Editor"

13 is provided so that experts can create, store and update the rules to be applied. *Id.* at 10:40-55

14 and 11:29-36.

15   **B.   The Accused Synopsys Software**

16   Synopsys makes Electronic Design Automation ("EDA") software products. EDA

17 software simplifies the job of designing complex integrated circuits. Ricoh has accused the

18 Customer Defendants of infringing the '432 patent through their use of various versions of the

19 Synopsys Design Compiler and HDL Compiler (collectively, "Design Compiler") software

20 products. *See* Ex. 8 at 2 n.2.[4]

21

22

23   [3] To distinguish the prior art during prosecution of the '432 application, Ricoh told the Patent
    Office that the design inputs of its alleged invention cannot be a "lower level" "architecture
24 dependent" input such as RTL, which was disclosed in the cited prior art. *See* Ex. 2 at 9-15; Ex.
    3 at 6-7. Further details on the prosecution history of the '432 patent as it applies to RTL may be
25 found in Synopsys's Motion for Summary Judgment of Noninfringement, D.I. 571 at pp. 4-5,
    and in Synopsys's and Customer Defendants' Claim Construction Brief, D.I. 627 at pp. 6-9.

26   [4] Dr. Soderman submitted three expert reports for Ricoh with respect to three Customer
27 Defendants: Aeroflex (Ex. 8), AMI (Ex. 9), and Matrox (Ex. 10). All three reports are virtually
    identical. As such, page and line citations to Dr. Soderman's reports herein will be limited to the
28 Aeroflex entities. Ex. 8.

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Design Compiler requires inputs that are dependent on specific arrangements of registers and that can only be created by users who have an understanding of the flow of data through those registers. That is the only fact material to the first reason for granting summary judgment in Synopsys's favor. That fact cannot be genuinely disputed:

- Ricoh has admitted that the Customer Defendants use inputs that "may be considered to be VHDL or Verilog." Ex. 6 at 4-5. VHDL and Verilog are hardware description languages. Adams Decl. ¶ 5.

- Ricoh's two infringement experts, Professor Papaefthymiou and Dr. Soderman, admitted that ███. See Ex. 12 at 9:6-7 and 7:18-24[5] and Ex. 11 at 72:19-25. They have admitted that ██. See Ex. 15 at 59:2-6 (██); see also id. at 59:13-60:7 and Ex. 11 at 80:8-13. Finally, they have admitted that ██. See Ex. 11 at 89:14-20.

- Synopsys is also submitting herewith the Declaration of Jay Adams (a Synopsys Scientist with more than a decade of experience developing and using Design Compiler) confirming Ricoh's experts' testimony that the Customer Defendants' inputs to Design Compiler describe a particular arrangement of registers, and the flow of data through those registers (see Adams Decl. ¶¶ 1-2), and that all seven Customer Defendant input files purportedly analyzed by Prof. Papaefthymiou

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[5] Professor Papaefthymiou submitted three expert reports for Ricoh with respect to three Customer Defendants: Aeroflex (Ex. 12), AMI (Ex. 13), and Matrox (Ex. 14). All three reports are virtually identical. As such, page and line citations to Prof. Papaefthymiou's reports herein will be limited to the Aeroflex entities. Ex. 12.

1   similarly describe a particular arrangement of registers, and the flow of data

2   through those registers. *See id.* ¶¶ 3-22 & Adams Exs. 1-9.

3   The following additional undisputed facts are also material to the second reason for

4   granting summary judgment in Synopsys's favor:

5   • The input descriptions accused of infringing step 4 of claim 13 ████████

6   ██

7   ████████.

8   • The "cell selection rules" accused of infringing step 3 of claim 13 ████████

9   ██. *See* Ex. 7 at 8-

10   12;[6] *see also* Ex. 11 at 139:10-140:14 and 244:8-245:13; *see also* Adams Decl. ¶

11   23.

12   • ██

13   ██

14   ████████████████████████████████████. *See* Adams Decl. ¶¶ 24-

15   26.

16   **III.   PROCEDURAL BACKGROUND**

17   In its original *Markman* order, the Court concluded that during prosecution of the '432

18   patent application, "the patentee expressly disclaimed all register transfer-level descriptions"

19   from the scope of the claimed "architecture independent actions and conditions." Ex. 5 at 12.

20   The Court therefore ruled that the phrase "architecture independent actions and conditions"

21   excludes all RTL descriptions as an input to the claimed process. *See id.*   The Court also

22   construed "expert system knowledge base" to require "software having a set of rules and

23   embodying expert knowledge of highly skilled VLSI designers." *Id.* at 17.

24

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26   [6] Ricoh served numerous infringement contentions throughout the case, for each of the
accused Customer Defendant inputs. Synopsys has chosen only a single one as an exhibit for
27   this motion. All of the infringement contentions use identical language in describing the accused
processes and instrumentalities. Frenkel Decl. ¶ 9.
28

1   Based on the Court's original construction of "architecture independent" and the

2 undisputed fact that the Customer Defendant inputs to Design Compiler were all at the RTL level

3 (or an even lower level such as gate level netlists), Synopsys moved for summary judgment of

4 noninfringement first in 2006 (D.I. 422) and again after the Court's stay was lifted in 2008 (D.I.

5 571). Ricoh opposed on the basis that there allegedly are two kinds of RTL, so-called "Darringer

6 RTL" and "non-Darringer RTL." (D.I. 594). Synopsys's motion was denied without prejudice

7 in March 2009 – subject to renewal after the Court reconsidered the meaning of the term

8 "architecture independent actions and conditions." D.I. 621 at 10.

9   During supplemental claim construction briefing, Ricoh again urged the Court to divide

10 RTL into two parts, this time into so-called architecture-dependent RTL, which it admitted it

11 disclaimed, and architecture-independent RTL, which it argued it did not disclaim. D.I. 630 at

12 15-16; *see also* Synopsys Responsive Brf., D.I. 633 at 12-14 (explaining Ricoh's fallacy).

13   In its October 23, 2009 Revised Claim Construction Order, the Court rejected Ricoh's

14 invitation to divide RTL and held that "a set of definitions of architecture independent actions

15 and conditions" means "a set of instructions of actions or conditions to which a circuit could be

16 subjected ***that are not dependent on any particular arrangement of hardware cells*** to perform

17 the actions or create or maintain the conditions." D.I. 644 at 7:1-4. Moreover, the Court held that

18 it was unnecessary to include a negative limitation reflecting the disclaimer of RTL from

19 "architecture independent" descriptions because "***any system for designing an ASIC that***

20 ***requires the user to input information based on the user having an understanding of the flow***

21 ***of data though registers, logic gates or any other hardware*** *a fortiori* would not be 'architecture

22 independent.'" *Id.* at 8:6-9.

23   The Court also observed that "[t]he parties have not requested the Court to determine

24 whether [the describing step] is performed by a user or whether it describes a further storing

25 step." *Id.* at 7:6-12. Synopsys understood the Court's statement as a recognition that the storing

26 steps are not performed by users.

27   Based on the Court's revised claim construction order, Synopsys sought leave to file the

28 present motion, which the Court granted at the November 23, 2009 CMC. D.I. 647 at 1:18-22.

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1   **IV.   LEGAL STANDARD**

2   Summary judgment is appropriate in a patent case, as in other cases, when there are no

3   genuine issues of material fact and the moving party is entitled to judgment as a matter of law.

4   *Nike Inc. v. Wolverine World Wide, Inc.*, 43 F.3d 644, 646 (Fed. Cir. 1994) (citing Fed. R. Civ.

5   P. 56(c)). An accused infringer seeking summary judgment of noninfringement may meet its

6   initial responsibility by providing evidence that would preclude a finding of infringement.

7   *Novartis Corp. v. Ben Venue Labs., Inc.*, 271 F.3d 1043, 1046 (Fed. Cir. 2001). Summary

8   judgment must be granted against a party which has failed to introduce sufficient evidence to

9   establish the existence of an essential element of its case. *Id*. A factual dispute is insufficient to

10   defeat summary judgment unless that dispute pertains to a genuine issue of material fact. *See*

11   *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986).

12   A patent infringement analysis involves two steps: (a) claim construction to determine the

13   scope of the claims, followed by (b) a determination of whether the properly construed claim

14   encompasses the accused product. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576,

15   1581-82 (Fed. Cir. 1996). Literal infringement requires that the patentee prove that the accused

16   product or process literally meets every element or limitation of a claim. *Rohm & Haas Co. v.*

17   *Brotech Corp.*, 127 F.3d 1089, 1092 (Fed. Cir. 1997). If even one element or limitation is not

18   met as claimed, then there is no literal infringement. *See Mas-Hamilton Group v. LaGard, Inc.*,

19   156 F.3d 1206, 1211 (Fed. Cir. 1998).

20   "[D]irect infringement requires a single party to perform every step of a claimed

21   method." *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329 (Fed. Cir. 2008), *cert.*

22   *denied*, 129 S. Ct. 1585 (2009). "[W]here the actions of multiple parties combine to perform

23   every step of a claimed method, the claim is directly infringed only if one party exercises

24   'control or direction' over the entire process such that every step is attributable to the controlling

25   party, *i.e.*, the 'mastermind.'" *Id.* "[M]ere arms-length cooperation will not give rise to direct

26   infringement by any party." *Id.* (citations omitted). "[T]he control or direction standard is

27   satisfied in situations where the law would traditionally hold the accused direct infringer

28

1 vicariously liable for the acts committed by another party that are required to complete

2 performance of a claimed method." *Id.* at 1330.

3 **V.   ARGUMENT**

4   Synopsys and the Customer Defendants move for summary judgment of noninfringement

5 on two independent bases. First, the Customer Defendants' design input files cannot be found to

6 be "architecture independent" because they indisputably describe a particular arrangement of

7 registers and require knowledge of the flow of data through those registers. Second, because (a)

8 step 3 of claim 13 is only performed by Synopsys (if performed at all), (b) step 4 is only

9 performed by the Customer Defendants (if performed at all), and (c) Ricoh has not argued that

10 the Customer Defendants direct or control any step allegedly performed by Synopsys, Ricoh

11 cannot establish that the Customer Defendants perform, direct or control all six steps of claim 13.

12
13   **A.   There Is No Infringement Because The Customer Defendants' Inputs
              Describe Particular Arrangements Of Registers**

14   There is no genuine dispute about the fact that the Customer Defendants' design input

15 files describe a particular arrangement of registers. There also is no genuine dispute about the

16 fact that the creation of those files require the user to have an understanding of the flow of data

17 though those registers. Based on those facts and the Court's October 23, 2009 Revised Claim

18 Construction Order, no reasonable jury could find that the Customer Defendant inputs are

19 architecture independent descriptions and thus summary judgment of noninfringement should be

20 entered.

21
22   **1.   Inputs That Are Dependent On Any Particular Arrangement Of
              Registers Are Not "Architecture Independent"**

23   As mentioned above, the Court's Order states that "architecture independent actions and

24 conditions," means:

25   actions or conditions to which a circuit could be subjected that are ***not***
26   ***dependent on any particular arrangement of hardware cells*** to perform the
            actions or maintain the conditions.

27 D.I. 644 at 7:1-4.

28

1   The Court's Order also makes clear that such "hardware cells" include registers. D.I.

2 644, at 8:6-9 ("registers, logic gates or any other hardware"). Ricoh's patent is to the same

3 effect. For example, the specification states that hardware components include registers:

4 "hardware components such as adders, comparators, *registers*, system controllers, etc." Ex. 1 at

5 3:65-67. It also describes hardware cells as containing information relating to a "description of

6 the cell at the register transfer level," in addition to information relating to logic gates and lower

7 level hardware. *Id.* at 9:21-33. The conclusion of the Court's Order also is compelled by the

8 prosecution history, throughout which Ricoh distinguished numerous prior art references as

9 requiring design inputs written as RTL descriptions. For a thorough explication of that record,

10 see Synopsys's Motion for Summary Judgment of Noninfringement (D.I. 571 at pp. 4-5);

11 Synopsys's Claim Construction Brief (D.I. 627 at pp. 6-9).

12
**2.   The Customer Defendants' Inputs Describe Particular Arrangements
         Of Registers**
13

14   As stated above, based on the prior admissions of Ricoh and its experts, there can be no

15 genuine dispute that the Customer Defendants' design input files are written in hardware

16 description languages that use RTL to specify registers and require the user to have an

17 understanding of the flow of data though those registers.

18   Synopsys completes the record on that score by submitting herewith, as Exhibits 1-7 to

19 the Adams Declaration, the ***complete*** Customer Defendant design inputs that Ricoh's

20 infringement expert, Professor Papaefthymiou, carefully ***abridged*** when quoting from them in

21 his earlier expert reports. In his declaration and for each of the ***entire*** accused design inputs

22 (*e.g.*, Aeroflex's channel_fir.v, written in the Verilog hardware design language), Dr. Adams

23 identifies where they specify particular arrangements of registers and the flow of data through

24 those registers in the form of control logic. Adams Decl. ¶¶ 6-21.

25   For example, Exhibit 1 to the Adams declaration is the ***entire*** Aeroflex design input file

26 channel_fir.v. In Adams Exhibit 8, that file has been annotated with different colors, and in

27 Adams Exhibit 9, the file has been graphically depicted. ████████████████████

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8   *See* Adams Decl. ¶¶ 8-16 & Adams Exs. 8-9; *see also* Adams Decl. ¶¶ 17-22 (pointing

9 out particular registers for each of the design input files in Adams Exhibits 2-7).

10   There is no genuine dispute as to the Customer Defendant design inputs attached as

11 Exhibits 1-7 to the Adams declaration. As the Court can see for itself, the design input files

12 describe particular arrangements of registers, and by their very nature, require an understanding

13 of the flow of data through those registers in order to create them.

14   On this indisputable record, no jury needs to be empanelled to determine that the

15 Customer Defendant design inputs are not "architecture independent." Summary judgment of

16 noninfringement is thus warranted.[7] *See Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986)

17 (summary judgment is mandated against a party who fails to establish the existence of an

18 element essential to that party's case).

19 **B.   There Is No Infringement Because No Single Entity Performs, Or Directs Or**
20 **Controls The Performance Of, All Steps Of Claim 13**

21   The asserted claims of the '432 patent also are not infringed because no single entity

22 performs all six steps of claim 13 or "directs or controls" their performance. Ricoh alleges that

23 each of the Customer Defendants, alone, performs the fourth "describing" step. Thus, unless

24

25

26   [7] As noted previously, although this motion only addresses independent claim 13, the other
27 asserted claims, numbers 14-17, all depend from claim 13. Therefore, if claim 13 is not
    infringed, neither are the dependent claims. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870
28 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

1   each of the Customer Defendants performs the remaining steps of claim 13, no single entity

2   directly infringes the asserted claims.

3   The Customer Defendants, however, do not perform the "storing" step 3. Only Synopsys

4   could allegedly be said to do so, without any direction or control by any of the Customer

5   Defendants. Consequently, summary judgment of noninfringement should be entered.

6   **1.   A Single Entity Or "Direction Or Control" Is Required To Find
            Infringement Of A Multi-Step Process Claim**

7

8   It is settled that "direct infringement requires a single party to perform every step of a

9   claimed method." *Muniauction*, 532 F.3d at 1329 (citing *BMC Resources, Inc. v. Paymentech,*

10 *L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007)); *see also Keithley v. Homestore.com, Inc.*, 636 F.

11 Supp. 2d 978, 985 (N.D. Cal. 2008). *BMC* and *Muniauction* were decided while this case was

12 stayed, and require a finding of noninfringement where there is no single entity that performs all

13 of the steps of a process claim, and where there is no one entity that directs or controls the

14 entities who, collectively and allegedly, practice all of the claimed process steps.

15   BMC's patent involved a method of debit bill payment using an ATM network, banks,

16 and payment processors. *BMC*, 498 F.3d at 1375. The Court held that because no defendant

17 practiced all steps of the claim, there was no infringement. *See id.* at 1380. In *dictum*, the

18 Federal Circuit observed that had there been "direction or control" by one defendant as a

19 "mastermind," then there might be infringement. *See id.* at 1381.

20   The following year, the Federal Circuit directly addressed the issue of "direction or

21 control" in *Muniauction*. Muniauction's patent involved an electronic auction system accessed

22 over the Internet, where end users (customers of the named defendant) input bids, and the

23 defendant's computer system processed those bids. *Muniauction*, 532 F.3d at 1322-23. There

24 was no dispute that the inputting step was performed by the customers, and the processing steps

25 were performed by the defendant on its computers. *See id.* at 1328-29. Based on the facts that

26 (a) defendant's customers paid defendant to use the bidding service, and (b) defendant provided

27 instructions to its customers about how to construct inputs to its system, the District Court

28

1   concluded that the defendant directed or controlled the actions of its customers which, according

2   to the District Court, was sufficient to support a verdict of infringement. *See id.* at 1329.

3   The defendant appealed and the Federal Circuit reversed. The Court first stated that "the

4   control or direction standard is satisfied in situations where the law would traditionally hold the

5   accused direct infringer vicariously liable for the acts committed by another party that are

6   required to complete performance of a claimed method." *Id.* at 1330 (citing *BMC*, 498 F.3d at

7   1379). The Court then noted the absence of any evidence that the defendant "had another party

8   perform steps [of the claimed method] on its behalf." *Id.* Consequently, the Court held that

9   defendant "Thomson does not infringe the asserted claims as a matter of law." *Id.*

10   **2.   Synopsys And The Customer Defendants Each Perform Different**
                         Actions That Are Alleged To Infringe Different Steps Of The Claimed
11   **Process**

12   As stated, claim 13 has six steps. Step 4 is the "describing" step discussed at length in

13   Section V.A, *supra*. Ricoh alleges that only the Customer Defendants perform that step.

14   However, as explained below, there can be no dispute that if anyone performs the third "storing"

15   step, it is Synopsys alone, not the Customer Defendants, and Synopsys does so without any

16   direction from, or control by, any of the Customer Defendants.

17   **a.   The '432 Patent Teaches That VLSI Experts Store "Cell**
                         Selection Rules" In A "Knowledge Base"
18

19   Step 3 of the process recited in claim 13 requires "storing in an expert system knowledge

20   base a set of rules for selecting hardware cells to perform the actions and conditions." The Court

21   has defined "expert system" as "software that solves problems through selective applications of

22   rules in the knowledge base," and "knowledge base" as "a portion of an expert system software

23   having a set of rules and emboding expert knowledge of highly skilled VLSI designers." Ex. 5

24   (D.I. 229) at 17:2-6. The Court has further defined "a set of cell selection rules" as "a set of

25   rules embodying the expert knowledge of highly skilled VLSI designers, each rule having an

26   antecedent portion (*e.g.*, IF) and an consequent portion (*e.g.* THEN)." *Id.* at 19:8-10.

27   The '432 patent teaches that the creation and storage of the cell selection rules in the

28   "expert system knowledge base" is performed by experts, not by end users of the system who

1   "may not possess the specialized expert knowledge of a highly skilled VLSI design engineer."

2   Ex. 1 at 2:15-20. To that end, the patent discloses that the rule language of the "path synthesizer

3   and cell selector" (PSCS) is designed to be understood and used by experts in VLSI design (*id.* at

4   10:40-55), and explains that (*id.* at 11:29-36):

> PSCS provides an interactive rule editor which enables the expert to update the rule set. The rules are stored in a database so that editing capabilities of the database package can be used for rule editing. To perform this operation the expert needs to be familiar with the various knowledge structures and the inferencing process. If this is not possible, then the help of a knowledge engineer is needed.

9   That teaching is confirmed by Ricoh's description to the Patent Office of the third

10   "storing" step during prosecution of the continuation of the '432 patent, *viz*, that the "system also

11   provides a knowledge-based expert system containing a knowledge base ***compiled by expert***

12   ***ASIC designers having a high level of expertise in circuit design***." Ex. 4 at 9. *See Ormco*

13   *Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1314-15 (Fed. Cir. 2007) ("When the application of

14   prosecution disclaimer involves statements from prosecution of a familial patent relating to the

15   same subject matter as the claim language at issue in the patent being construed, those statements

16   in the familial application are relevant in construing the claims at issue."); *Sprint*

17   *Communications Co. v. Vonage Holdings Corp.*, 518 F. Supp. 2d 1306, 1316 (D. Kan. 2007)

18   (following *Ormco* and analyzing the meaning of terms in a parent patent in light of statements

19   regarding those identical terms in a child patent).

b.   The "Set Of Rules" Identified By Ricoh Are Stored In Design Compiler By Synopsys, Not By The Customer Defendants

22   In its Supplemental Final Infringement Contentions, Ricoh states that the third step of

23   claim 13 is infringed due, *inter alia*, ████████████████████████████████

24   ██

25   ██ Ex. 7 at 11. ████████

26   ██

27   █████████████   *Id.* at 7.   ██████████████████████████████

28   ██

1 ███

2 ███

3 ███████████████████ *Id.* ████████████████████████████████████

4 ███

5 █████████████████████████████████ *See id.* at 7-11.

6   Of course, Synopsys wrote all of the executable source code in Design Compiler, and

7 Ricoh cites to *Synopsys's* internal names because Synopsys wrote these "rules" and stored them

8 in Design Compiler.

9   In fact, Ricoh's expert, Dr. Soderman, admitted that █████████████████████

10 ██████████████████████████████████████. Ex. 11 (Soderman 8/14/06

11 Depo) at 244:8-245:13.   Thus, Ricoh's own evidence of alleged infringement bars any genuine

12 dispute about the fact that Synopsys, alone, creates and stores the accused rules in Design

13 Compiler, not the Customer Defendants.

14   In his declaration, Dr. Adams confirms that the ████████████████████████

15 ███

16 ███

17 ████████████████████████   Adams Decl. ¶ 23.   On the flip side, Ricoh has not adduced even a

18 shred of evidence that ███████████████████████████████████████

19 ███

20 ███

21 ███

22 █████████████████ *See also id.* ¶¶ 24-26.

23

24

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26 ────────────────────────────────

27   [8] ██████████████████████████████████████   Adams Decl. ¶ 23.

28 ██████████████████████ *Id.*

1   **c.   Ricoh's Argument That The Installation Of Design Compiler**
             "Stores" Rules In An Expert Knowledge Base Is Specious
2

3   Aware of its "distributed" infringement problem, Ricoh has blithely asserted that the

4   required step of "storing in an expert system knowledge base a set of rules for selecting hardware

5   cells" is performed by the Customer Defendants when ████████████████████████████

6   ██

7   ██████████████████████████████████████   *E.g.*, Ex. 8 (Soderman expert report as to

8   Aeroflex) at 21. That assertion is specious.

9   Claim 13 requires "storing" rules in the knowledge base, not "loading or installing"

10 software onto a computer, particularly when the software already has the rules stored in its

11 knowledge base. The plain and ordinary meaning of "storing" is to place or leave in a location.

12 Thus the "rules" of step three must be placed or left in a location. Step three then goes on to

13 specify the particular location where the rules must be placed or left, namely in "an expert

14 system knowledge base."

15   "Installing" software on a computer does not place or leave rules in an expert system

16 knowledge base. Rather, installation is a completely different task. The installation process

17 simply copies the existing software from some distribution media (*e.g.*, a CD) onto a hard drive

18 of a computer system. Similarly, the "loading" process simply copies the executable code

19 installed on the hard drive into the computer memory.   In both processes, if the rules are not

20 already stored in the software's knowledge base, they will not exist on the computer: neither on

21 the hard drive nor in memory. But if, as is the allegation regarding Design Compiler, the

22 software already contains a database of stored rules, then the installation and loading processes

23 will simply copy the software's existing database onto the hard drive and into memory,

24 respectively. In no event will the installation or loading process perform the claimed act of

25 taking a set of rules and placing or leaving them in a knowledge base.

26   In short, there can be no genuine dispute about the fact that before any installation or

27 loading of Design Compiler by the Customer Defendants, the "rules" were already stored in the

28 software by Synopsys. Thus if anyone performs step 3 of claim 13, it is Synopsys, not the

1   Customer Defendants. Similarly, there is no dispute that the only entities accused of performing

2   the "describing" required by step 4 are each of the Customer Defendants, not Synopsys. Because

3   the alleged performance of the claimed process steps is distributed among separate entities, none

4   of which directs or controls the actions of the others, there can be no infringement. Summary

5   judgment, therefore, must be granted. *Cf. Advanced Software Design Corp. v. Fiserv, Inc.*, 650

6   F. Supp. 2d 924, 930-31 (E.D. Mo. 2009) (granting summary judgment of noninfringement due

7   to the lack of any direct infringer of the patent-in-suit); *Medtronic, Inc. v. AGA Medical Corp.*,

8   No. C-07-0567, 2009 WL 1163934, at *1 (N.D. Cal. Apr. 28, 2009) (Chesney, J.) (same);

9   *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 614 F. Supp. 2d 90, 116-123 (D. Mass. 2009)

10 (granting judgment as a matter of law and directing a verdict of noninfringement in light of

11 *Muniauction* in a patent involving a software provider and customer inputs); *Keithley*, 636 F.

12 Supp. 2d at 985 (Illston, J.) (granting summary judgment of noninfringement on process claim

13 involving "storing" step and "accessing" step performed by different entities); *Global Patent*

14 *Holdings, LLC v. Panthers BRHC LLC*, 586 F. Supp. 2d 1331, 1334-35 (S.D. Fla. 2008)

15 (dismissing a patent complaint for failure to state a claim when there could be no direct

16 infringement because the claims could not be performed by any single entity), *aff'd*, 318 Fed.

17 Appx. 908 (Fed. Cir. 2009).

18 **VI.   CONCLUSION**

19   For the foregoing reasons, Synopsys and the Customer Defendants respectfully request

20 the Court to grant this motion and enter judgment for them and against Ricoh on the issue of

21 infringement.

22
                                                    Respectfully submitted,
23

24 Dated: January 8, 2010   WILSON SONSINI GOODRICH & ROSATI
                                                    Professional Corporation
25

26   By: /s/ Ron E. Shulman
                                                            Ron E. Shulman
27
                                                    Attorneys for Plaintiff SYNOPSYS, INC. and
28   for the Customer Defendants